REMARKS

Claims 1-7, 9-12 and 14-29 are pending. Claims 3 and 10 are amended. Claims 8 and 13 are cancelled. Claims 14-29 are newly added. No new matter has been added to the application.

Claim Rejections Under 35 U.S.C. § 112

Claim 13 was rejected under 35 U.S.C. § 112, second paragraph, because the term "cut" is unclear. Claim 13 has been cancelled. Withdrawal of the rejection is requested.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1, 3, 5 and 8-12 were rejected under 35 U.S.C. §102(b) as being anticipated by ***Cole*** (U.S. Patent 5,994,970); Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Cole* in view of ***Gillig*** (U.S. Patent 5,856,766); Claims 4, 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Cole* in view of ***Wojewoda*** (U.S. Patent 5,731,742).

The present invention, as recited in claim 1, is a temperature compensated oscillator. The oscillator has a temperature detection circuit and a temperature compensation circuit. The temperature compensation circuit keeps an oscillation frequency signal substantially constant based on the temperature detection circuit. The oscillator also has a selection means for selecting whether to enable or disable the temperature compensation function.

Applicant respectfully submits that *Cole* does not disclose "wherein a selection means is provided which selects whether to enable or disable a temperature compensation function of said temperature compensation circuit" as recited in claim 1.

Cole discloses a temperature compensated crystal oscillation circuit. The circuit comprises a compensation circuit (14) with a digital temperature sensor (16) and a look-up table (20) for setting a temperature coefficient based on temperature input by the digital temperature sensor. A switched capacitor array (22) receives the temperature coefficient and adjusts the capacitive load on the oscillator circuit (12). *Cole* also discloses a program interface (24) for calibrating the crystal's characteristics.

The Examiner alleged that the program interface of *Cole* is a selection means for selecting whether to enable or disable a temperature compensation function as recited in Claim 1. (Office Action, page 3) The program interface of *Cole* is only used during the manufacture of the oscillation circuit to calibrate the crystal's characteristics. (Col. 4, lines 1-4.) Correct capacitive loads are determined for several discrete temperatures. The values are interpolated and data for the look-up table is generated. (Col. 4, lines 9-19.) Once the crystal has been calibrated, the program interface is no longer used. (Col. 8, lines 35-39.) The switched capacitor array is continuously adjusted based on the temperature and the temperature coefficient look-up table. *Cole* does not disclose a selection means for enabling or disabling the temperature compensation function. Therefore, *Cole* does not disclose the elements as recited in claim 1.

Applicant respectfully submits that *Cole* in view of *Wojewoda* does not disclose

> wherein said selection means has means for separating the variable capacitor so that the variable capacitor is not included in said oscillation capacitor when fixing the capacitance value of said oscillation capacitor to the predetermined capacitance value

as recited in claim 7.

The Examiner admitted that *Cole* does not disclose a variable capacitor in the oscillation circuit which varies based on the temperature compensation function. (Office Action, page 6) However, the Examiner cited *Wojewoda* for disclosing such a feature.

Wojewoda discloses varactors set by a warp switching bank and adjusted by the temperature compensation circuit. (Col. 4, lines 14-18.) However, *Wojewoda* does not disclose a means for separating the varactor from the oscillation capacitor. *Wojewoda* discloses that

> the warp switching bank can select correct capacitance needed to drive the oscillator 14 to a nominal frequency while the temperature compensation circuit 22 simultaneously adjusts the varactors 68 to vary load capacitance over temperature in response to the temperature compensation signal.

(Col. 4, lines 18-24.) Both the warp switching bank and the temperature compensation circuit adjust the varactors. However, there is no means for selecting whether to separate the varactor from the oscillation capacitor. Therefore, *Cole* in view of *Wojewoda* does not disclose the elements as recited in claim 7.

Accordingly, withdrawal of the rejections of claims 1-7 and 9-12 is hereby solicited.

New Claims

Claims 14-29 are newly added.

Regarding claims 14 and 15, "a switch to enable said temperature compensation function and a switch to disable said temperature compensation function" correspond to the "pair of transmission gates 41 and 42" of the first embodiment. (Specification, page 9, line 21 to page 11, line 13; Fig. 1).

Regarding claims 16-18, the specification discloses the elements of these claims in several embodiments. For example, with regard to the first embodiment, the specification describes the functionality of the selection circuit as "whereby the capacitance value of the oscillation capacitor varies depending on the temperature so that the oscillation frequency of the oscillation circuit 20 is temperature-compensated to be kept constant," (specification, page 10, lines 21-24) and "whereby the capacitance value of the oscillation capacitor is fixed to predetermined capacitance value in accordance with the constant voltage so that the oscillation frequency of the oscillation circuit 20 is not temperature-compensated" (specification, page 11, lines 3-6).

Claims 19 and 20 correspond to original claims 13 and 10 respectively. Claim 19 is modified from original claim 13 to overcome the § 112 rejection of claim 13.

Claims 21-29 are claims for a method of manufacturing a temperature compensated oscillator. The claims have support in the specification at page 11, line 21 to page 14, line 26. This section of the specification discloses "steps of the adjustment work." However, after the steps are completed, the temperature compensation function is enabled "resulting in a finished micro temperature compensated oscillator." (Specification, page 12, lines 25 to page 13, line 1.)

The specification also discloses using other "resonators" besides a "quartz crystal." A piezoelectric element is disclosed as a resonator. (Specification, page 13, line 28 to page 14, line 2.) Also, an AT cut quartz crystal is disclosed as a resonator. (Specification, page 1, lines 15-21.)

In view of the aforementioned amendments and accompanying remarks, Applicant submits that that the claims, as herein amended, are in condition for allowance. Applicant requests such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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